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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/863,809 | 05/22/2001 | John F. Croix | SILI:006US | 8929 |

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EXAMINER

MOSLEHI, FARHOOD

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2154

DATE MAILED: 12/30/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,809

Applicant(s)

CROIX ET AL.

Examiner

Farhood Moslehi

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20,22-25,28,30,31,35,37 and 38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20,22-25,28,30,31,35,37 and 38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 21,26,27,29,32-34,36,39-41 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-20,22-25,28,30,31,35,37 and 38 are drawn to a method for enumerating a set of parameters in arrays, classified in class 709, subclass 313.
 - II. Claims 21 and 41 are drawn to a system for enumerating a set of parameters in arrays, classified in class 709, subclass 245.
 - III. Claims 26,27,29,32-34,36,39 and 40 are drawn to a computer program to perform the steps of enumerating a set of parameters within other programs, classified in class 709, subclass 329.

The inventions are distinct, each from the other because of the following reasons. Invention III, II and I are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as a method for enumerating a set of parameters in arrays. Invention II and III has separate utility such as a system, a computer program and an integrated circuit for enumerating a set of parameters in arrays respectively. See MPEP 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art, by their different classification, different searches and their divergent subject matter, and the search required for group I

is not required for group II and III, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. David Bahler on November 7, 2003 a provisional election was made with traverse to prosecute the invention of I, claims 1-20,22-25,28,30,31,35,37 and 38. Affirmation of this election must be made by applicant in replying to this office action. Claims 21,26,27,29,32-34,36, 39-41 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

2. Claims 1-20,22-25, 28,35,37 and 38 are presented for examination. Claims 21, 26,27,29,32-34,36, 39-41 are non-elected.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20,22-25,28,30,31,35,37 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-10, 12-18, 20,22,23,28 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Lyer et al. (hereinafter Lyer).

7. As per claim 1, Lyer shows a method, comprising: enumerating a set of parameters (e.g. col. 1, lines 5-7); providing an indication in a first set of arrays of whether to acquire from a first program portion an information associated with one or more parameters of the set of parameters, in response to a second program portion issuing a query to a third program portion for identifying the one or more parameters (e.g. col. 9, lines 4-13); populating a second set of arrays in an image of the first set of arrays with the information received from the first program associated with the one or more parameters, in response to a request from the second program portion (e.g. col. 4, lines 39-62);

Evaluating the third program portion by utilizing the information associated with the one or more parameters from the second set of arrays to derive an output from the third program portion for return to the second program portion; and conveying the output from the second program portion to the first program portion (e.g. Figure 2).

8. As per claim 16, it is rejected for similar reasons as stated above.

9. As per claim 22, it is rejected for similar reasons as stated above.
10. As per claim 23, it is rejected for similar reasons as stated above.
11. As per claim 28, it is rejected for similar reasons as stated above.
12. As per claim 2, Lyer shows the method, wherein providing the indication includes setting a respective flag to either a first value or a second value in the first set of arrays for each of the set of parameters by the third program portion (e.g. col. 5, lines 12-22).
13. As per claim 3, Lyer shows the method where the first value indicating to the second program portion to seek the information associated with the one or more parameters, and the second value indicating to the second program portion not to seek the information associated with the one or more parameters (e.g. col. 5, lines 41-51).
14. As per claim 4, Lyer shows the method wherein populating with the information includes filling a value obtained from the first program portion in the second set of arrays corresponding to the one or more parameters with their said flags having the first value (e.g. col. 8, lines 5-17).
15. As per claim 5, Lyer shows the method where the value for each of the one or more parameters of the set of parameters is loaded in a location in the second set of arrays responsive to said query to third program portion for determining a type of data required at said location (e.g. col. 5, lines 55-60, since B's exception handlers are a subset of C's, then it is inherent that C determine data types).
16. As per claim 6, Lyer shows the method wherein the first program portion includes an application program for electronic design automation (It is an inherent property of

Lyer's system to include an electronic design automation program as any of the operating programs).

17. As per claim 7, Lyer demonstrates the method wherein the second program portion includes an operable interface with the first program portion (an operable interface is an inherent property of Lyer's system, without an operable interface between the first and second portion programs communications would not have been possible).

18. As per claim 8, it is rejected for the similar reasons as stated above.

19. As per claim 9, Lyer describes the method wherein the model includes one or more active models, each active model having a dataset and an algorithmic content (It is an inherent property of any program portion to have a dataset and algorithmic content).

20. As per claim 10, Lyer describes the method, wherein the plurality of rules includes a plurality of non-application specific core algorithms, each non-application specific core algorithm having one or more application specific functions associated with the first portion (e.g. col. 8, lines 27-42).

21. As per claim 12, Lyer shows the method, wherein the first program portion communicates with the third program portion through the second program portion utilizing a parameter block interface (e.g. col. 3, lines 28-36).

22. As per claim 13, Lyer describes the apparatus wherein the parameter block interface is used to evaluate said one or more parameters either for a single element or for a plurality of elements (e.g. col. 3, lines 28-36).

23. As per claim 14, Lyer describes the method wherein the second program portion utilizing one or more transactions, and the second program portion communicates with the third program portion through at least one query call and at least one evaluate call (e.g. col. 5, lines 41-67).

24. As per claim 15, Lyer describes the method wherein the second program portion communicates with the third program portion through one or more said query and evaluate calls in a shared workspace (e.g. col. 6, lines 25-39).

25. As per claim 17, Lyer describes the method wherein the first plurality of arrays of said first data structure includes one or more predetermined parameter types and the second plurality of arrays of said first data structure includes a result parameter type (e.g. col. 7, lines 35-51, it is an inherent property of passing parameters between different parts of a program to keep track and store in arrays the first, second, third and the result parameter types).

26. As per claim 18, it is rejected for similar reasons as stated above.

27. Claims 20 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Sriram et al. (hereinafter Sriram).

28. As per claim 20, Sriram teaches a method for evaluating a rule, comprising: Querying said rule to determine one or more requirements that need to be fulfilled by data such that said rule can be evaluated (e.g. col. 12, lines 38-41); utilizing a parameter block interface having one or more fields for passing the data to the rule (e.g. col. 12, lines 34-39); and filling the one or more fields of said parameter block interface

dynamically responsive to the one or more requirements of said rule (e.g. col. 46, lines 46-51).

29. As per claim 35, it is rejected for similar reasons as stated above.

30. Claims 25, 31 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Tamaki.

31. As per claim 25. Tamaki shows an integrated circuit design in accordance with the method of claim1 (e.g. page 2, paragraph 0013).

32. As per claim 31, it is rejected for similar reasons as stated above.

33. As per claim 38, it is rejected for similar reasons as stated above.

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyer in view of Kawas et al. (hereinafter Kawas).

36. As per claim 11, Lyer does not specifically show the method wherein the plurality of rules includes an electrical characteristics rule to determine a performance metric of an under test circuit. Kawas shows the method wherein the plurality of rules includes an electrical characteristics rule to determine a performance metric of an under test circuit (e.g. page 3, paragraph 35). It would have been obvious to one of ordinary skill in the

art to combine Lyer and kawas. The motivation would have been an integrated circuit design method for optimum parameter passing.

37. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyer in view of Vasudevan et al. (hereinafter Vasudevan).

38. As per claim 19, Lyer does not specifically describe the method, wherein each of said first plurality of arrays of said first and second data structures having a first dimensionality determined dynamically, in response to the first plurality of parameters, and each of said second plurality of arrays of said first and second data structures having a second dimensionality determined dynamically, in response to the second plurality of parameters. Vasudevan teaches the method, wherein each of said first plurality of arrays of said first and second data structures having a first dimensionality determined dynamically, in response to the first plurality of parameters, and each of said second plurality of arrays of said first and second data structures having a second dimensionality determined dynamically, in response to the second plurality of parameters (e.g. col. 20, lines 36-50). It would have been obvious to one of ordinary skill in the art to combine Lyer and Vasudevan. The motivation would have been for the system to save system resources in order to optimize system performance.

39. Claim 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyer in view of Khou et al. (hereinafter Khou).

40. As per claim 24, Lyer does not specifically teach the method further comprising verifying a design of an integrated circuit. Khou shows the method further comprising verifying a design of an integrated circuit (e.g. col. 1, lines 44-51). It would have been

obvious to one of ordinary skill in the art to combine Lyer and Khou. The motivation would have been to test the design of the integrated chip design to achieve parameter passing via an integrated circuit.

41. As per claim 30, it is rejected for similar reasons as stated above.

42. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sriram in view of Khou.

43. As per claim 37, Sriram does not specifically teach the method further comprising verifying a design of an integrated circuit. Khou shows the method further comprising verifying a design of an integrated circuit (e.g. col. 1, lines 44-51). It would have been obvious to one of ordinary skill in the art to combine Sriram and Khou. The motivation would have been to test the design of the integrated chip design to achieve parameter passing via an integrated circuit.

Conclusion

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent number 6,415,334 to Kanamori.

US Patent number 6,173,388 to Abercrombie et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhood Moslehi whose telephone number is 703-305-8646. The examiner can normally be reached on M-F 8:30-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 703-305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5484.

fm



JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
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